

**Notice of Allowability**

Application No.

10/665,049

Examiner

Thuy V. Tran

Applicant(s)

VARON LIGHTING, INC.

Art Unit

2821

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/17/2003 and telephone interview held on 09/21/2004.
2. ☒ The allowed claim(s) is/are 1-13 and 15-25.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

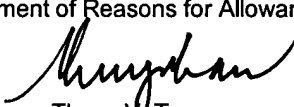
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 092104.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 09/17/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 092104.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
Thuy V. Tran  
Examiner  
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### **DETAILED ACTION**

This is a response to the Applicant's filing on September 17<sup>th</sup>, 2003 and the telephone interview held on September 21<sup>st</sup>, 2004. In virtue of this filing and this interview:

- Claims 1-25 are originally filed;
- Claim 14 is canceled (in virtue of this interview; see details in the attached Interview Summary, paper No.: 092104); and thus
- Claims 1-13 and 15-25 are now presented in the instant application.

#### ***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. William C. Clarke (Reg. No.: 27427) on September 21<sup>st</sup>, 2004. The amendment includes:

#### ***In the specification:***

*Page 12, line 4, change "Circuit No. 1" to --The first circuit--;*

*Page 12, line 6, change "Circuit No. 2" to --The second circuit--;*

*Page 12, line 7, change "Circuit No. 3" to --The third circuit--;*

*Page 12, lines 8-9, change "Circuit No. 4" to --The fourth circuit--;*

*Page 12, line 11, change "lighting" to --lighting--;*

*Page 13, lines 13-17, delete "wherein said equalizing means oscillator circuit... zener diode of the DC voltage reference circuit";*

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*Page 16, lines 1-5, delete "wherein said equalizing means oscillator circuit... zener diode of the DC voltage reference circuit";*

***In the claims:***

*Claim 1, line 1, delete "means";*

*Claim 1, line 5, delete "means"; and change "the" to --an--;*

*Claim 1, line 9, delete "means";*

*Claim 1, line 12, delete "means";*

*Claim 1, lines 13-18, delete "wherein said equalizing means oscillator circuit ... voltage reference circuit";*

*Claim 1, line 19, delete "means";*

*Claim 1, line 20, delete "said DC voltage equaling circuit";*

*Claim 1, line 21, insert --lamp filament voltage equalizing oscillator-- between "start" and "circuit";*

*Claim 1, line 23, delete "voltage divider and";*

*Claim 1, line 25, delete "means"; and change "circuit triac" to --triac circuit--;*

*Claim 1, line 27, delete "means";*

*Claim 1, line 28, delete "circuit" and insert --AC mains power line supply control configured-- therefor;*

*Claim 1, line 29, insert --DC-- in front of "voltage"; and insert --oscillator-- between "reference" and "circuit"; and delete "means";*

*Claim 1, line 30, change "circuit triac" to --triac circuit--; and change "for coupling" to --being coupled--; and insert --a-- between "between" and "pulsing";*

*Claim 1, line 31, insert --output-- between "level" (first occurrence) and "of" (first occurrence); insert --DC-- between "said" (first occurrence) and "voltage" (second occurrence); insert --oscillator--*

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*between "reference" and "circuit"; insert --an-- between "and" and "AC" (first occurrence); and insert --input-- between "level" (second occurrence) and "of" (second occurrence);*

*Claim 1, line 32, insert --means-- between "source" and ",";*

*Claim 1, line 33, delete "means";*

*Claim 1, line 34, insert --AC power-- between "said" and "line"; and insert --circuit-- between "triac" and ".";*

*Claim 2, line 1, delete "means"; and insert --of said AC power source means-- between "voltage" (second occurrence) and "is";*

*Claim 2, line 2, delete "output voltage";*

*Claim 3, line 1, delete "means";*

*Claim 4, line 1, delete "means";*

*Claim 4, line 3, delete "a" (any of them);*

*Claim 5, line 1, delete "means";*

*Claim 6, line 1, delete "means";*

*Claim 6, line 2, insert --means-- between "source" and "is";*

*Claim 7, line 1, delete "means";*

*Claim 7, line 2, change "source" to --supply--; and insert --converted to-- between "is" and "a";*

*Claim 8, line 1, delete "means";*

*Claim 8, line 2, change "power line control triac is an" to --AC power line supply control triac circuit is connected to the--;*

*Claim 9, line 1, delete "means" (first and second occurrences);*

*Claim 9, line 5, insert --filament voltage equalizing oscillator-- between "lamp" and "circuit" (first occurrence); and delete "means";*

*Claim 10, line 1, delete "means";*

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*Claim 10, line 2, delete "means";*

*Claim 10, line 3, delete "control" and insert --lamp filament voltage equalizing oscillator-- therefor;*

*Claim 10, line 4, delete "means";*

*Claim 11, line 1, delete "means";*

*Claim 11, line 3, insert --DC-- between "said" and "voltage" (second occurrence); and delete "means";*

*Claim 12, line 1, delete "means";*

*Claim 12, line 3, change "the" to --a--; and delete "of";*

*Claim 13, line 1, insert --for incandescent lamps, lamp loads, LED arrays, and LED array loads-- between "source" and "providing"; and change "the" to --a--; and delete "of";*

*Claim 13, line 2, change "wherein" to --comprising--; and change "provides" to --to provide--;*

*Claim 13, line 4, insert --and-- between ",", and "to";*

*Claim 13, line 5, delete "of" and insert --further-- after "source";*

*Claim 13, line 7, delete "a."; and insert --means-- between "source" and "comprising";*

*Claim 13, line 9, delete "b."; and delete "a voltage regulator means circuit for lamps and lamp loads";*

*Claim 13, line 12, change "voltage output" to --the output voltage--;*

*Claim 13, line 13, insert --the-- between "match" and "internal";*

*Claim 13, line 14, delete "power line supply source" and insert --said-- therefor;*

*Claim 13, line 16, insert --the-- between "of" and "incandescent"; and change "and" (first and second occurrences) to --or--;*

*Claim 13, line 17, change "and" to --or--; delete "." and insert --in operation;-- therefor;*

*Claim 13, in the line following the line 17, add:*

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*--and wherein the voltage regulator circuit comprises:*

*a voltage sensing circuit for sensing the output of said step-down transformer comprising a full-wave bridge rectifier circuit to provide a pulsing DC voltage, a spike filter capacitor and a filter capacitor to suppress ripple currents;*

*a soft-start lamp filament voltage equalizing oscillator circuit to limit inrush currents, said soft-start lamp filament voltage equalizing oscillator circuit connected to a pulsing DC voltage output of said full-wave bridge rectifier circuit of said voltage sensing circuit, said soft-start lamp filament voltage equalizing oscillator circuit comprising a zener diode and a capacitor;*

*a DC voltage reference oscillator circuit for providing a DC voltage reference level across output of said soft-start oscillator circuit comprising a zener diode, a transistor, and a current limiter network of two resistors to provide an oscillation process wherein oscillation frequency is per values of said zener diode, said current limiter network of two resistors and said transistor to control conduction of an AC power line supply control triac circuit within predetermined voltage level ranges; and*

*an AC mains power line supply control circuit for regulating voltage output of said 115V AC to 480V AC power supply, said AC mains power line supply control circuit configured across said DC voltage reference oscillator circuit comprising said AC power line supply control triac circuit, an opto-isolator triac driver being coupled between a pulsing DC voltage level output of said DC voltage reference oscillator circuit and an AC voltage level input of said AC power source means, a capacitor to initiate conduction of said AC power line control supply triac circuit at start-up, and a resistor to limit current applied to said AC line control triac circuit.--*

*Claim 14: canceled;*

*Claim 15, line 1, delete "means"; and insert --of said AC power source means-- between "voltage" (second occurrence) and "is";*

*Claim 16, line 1, delete "means";*

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*Claim 17, line 1, delete "means";*

*Claim 17, line 2, delete "a" (any occurrence);*

*Claim 18, line 1, delete "means";*

*Claim 19, line 1, delete "means";*

*Claim 19, line 2, insert --means-- between "source" and "is";*

*Claim 20, line 1, delete "means";*

*Claim 20, line 2, change "source" to --supply--; and insert --converted to-- between "is" and "a";*

*Claim 21, line 1, delete "means";*

*Claim 21, lines 1 and 2, change "power line control triac is an" to --AC power line supply control triac circuit is connected to the--;*

*Claim 22, line 1, delete "means" (first and second occurrences);*

*Claim 22, line 5, insert --filament voltage equalizing oscillator-- between "lamp" and "circuit" (first occurrence); and delete "means";*

*Claim 23, line 1, delete "means"; and insert --the-- between "wherein" and "internal";*

*Claim 23, line 2, delete "means";*

*Claim 23, line 3, delete "control" and insert --lamp filament voltage equalizing oscillator-- therefor;*

*Claim 23, line 4, delete "means";*

*Claim 24, line 1, delete "means";*

*Claim 24, line 3, change "an" to --the--; and insert --DC-- between "said" and "voltage" (second occurrence); and delete "means";*

*Claim 25, line 1, delete "means"; and*

*Claim 25, line 3, delete "of"; and*

***In the drawings:***

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*Both Figures 1 and 2 are required to be provided in a new set of replacement sheets including legible reference numerals/textual characters as described in the specification, corrected legend remarks, and uniform drawing lines (as discussed during the interview on 09/21/2004).*

***Allowable Subject Matter***

2. Claims 1-13 and 15-25 are allowed.

***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

Prior art fails to disclose or fairly suggest:

- A voltage regulator circuit for lamps, LED arrays, and lamp and LED array circuit loads comprising (1) a sensing circuit for sensing an output of the step-down transformer comprising a full-wave bridge rectifier circuit to provide a pulsing DC voltage, a spike filter, and a filter capacitor to suppress ripple currents, and (2) an AC mains power line supply control circuit for regulating voltage output of the 115 VAC to 480 VAC power supply, the AC mains power line supply control circuit configured across the DC voltage reference oscillator circuit comprising the AC power line supply control triac circuit, an opto-isolator triac driver being coupled between a pulsing DC voltage level output of the DC voltage reference oscillator circuit and an AC voltage input of the AC power source means, a capacitor to initiate conduction of the AC power line control supply triac circuit at start-up, and a resistor to limit current applied to the AC power line control triac circuit, in combination with the remaining claimed limitations as called for in independent claim 1 (claims 2-12 are allowed since they are dependent on claim 1); and



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- A low voltage power supply for incandescent lamps, lamp loads, LED arrays, and LED array loads for providing a low voltage within a range from 11.0 to 12.5 VAC comprising a voltage regulator circuit to provide a linear output response to input power variations and load changes of the low power supply source, and to keep the low voltage power supply source voltage output constant within the range from 11.0 to 12.5V AC, wherein the voltage regulator circuit comprising a voltage sensing circuit for sensing the output of the step-down transformer comprising a full-wave bridge rectifier circuit to provide a pulsing DC voltage, a spike filter, and a filter capacitor to suppress ripple currents, and an AC mains power line supply control circuit for regulating voltage output of the 115 VAC to 480 VAC power supply, the AC mains power line supply control circuit configured across the DC voltage reference oscillator circuit comprising the AC power line supply control triac circuit, an opto-isolator triac driver being coupled between a pulsing DC voltage level output of the DC voltage reference oscillator circuit and an AC voltage level input of the AC power source means, a capacitor to initiate conduction of the AC power line control supply triac circuit at start-up, and a resistor to limit current applied to the AC power line control triac circuit, in combination with the remaining claimed limitations as called for in independent claim 13 (claims 15-25 are allowed since they are dependent on claim 13);

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Citation of relevant prior art***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Wong (U.S. Patent No. 6,456,511) discloses an output isolated switching power supply.

Prior art Appelberg et al. (U.S. Patent No. 6,304,039) discloses a power supply for an EL panel.

Prior art Peil (U.S. Patent No. 5,428,267) discloses a regulated DC power supply.

Prior art Mortimer et al. (U.S. Patent No. 5,204,587) discloses a lamp power control.

Prior art Vossough et al. (U.S. Patent No. 5,192,897) discloses a ballast for gas discharge lamps.

Prior art Marson et al. (U.S. Patent No. 5,077,486) discloses a power supply for lamps.

Prior art Quazi et al. (U.S. Patent No. 4,864,482) discloses a conversion circuit for limiting inrush current.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuy V. Tran  
Examiner  
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09/21/2004

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over a light gray grid background.